UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,005	09/05/2003	Gary K. Law	06005/39537	8163

4743 7590 05/27/2009

MARSHALL, GERSTEIN & BORUN LLP
233 SOUTH WACKER DRIVE
6300 SEARS TOWER
CHICAGO, IL 60606-6357

EXAMINER	
THERIAULT, STEVEN B	
ART UNIT	PAPER NUMBER
2179	
MAIL DATE	DELIVERY MODE
05/27/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/656,005	LAW ET AL.	
	Examiner	Art Unit	
	STEVEN B. THERIAULT	2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-79* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-79* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/17/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the following communications: arguments filed 01/29/2009 with an IDS filed 10/17/2008.

This action is made Final.

2. Claims 1 –79 are pending in the case. Claims 1, 18, 34, and 58 are the independent claims.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.
Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Applicant response to double patenting rejection

Applicant argues that the double patenting rejection is improper and should be withdrawn because they believe the claim language of the 468' patent contains distinct subject matter differentiating the claims from the present application. The examiners position remains the same in light of applicant's arguments. Applicant argues that the difference in claim 1 of the 468' application and the present application is the "present application deals with configuration data defining how and when a state machine changes states and the 468' claims are directed to data how the machine outputs will be set when the machine is in various states". The Examiner agrees with the assessment but does not agree with the conclusion. The differences alleged between the claims are obvious variations in dealing with and controlling/storing data. Applicant asserts the difference is how the configuration

controls how the state machine will operate in various states verses the data that controls how the machine transitions but the argued difference is in the end just data and its use. The structure of both claims are directed to displaying graphical elements with states that transition when a specific operation or input is applied. The 468' deals with configuration data for the elements and the present application deals with state transition data. It would have been obvious to one of ordinary skill in the art to display state transitions on a graphical element in a variety of forms for the purposes of conveying to the user the operation of a processing plant. The same rationale applies to claims 34, 35, 45 and 49 and the claims remain rejected as reciting language that is conflicting with the 468' patent.

4. Claims 1, 34 and 58 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 35 and 49 of U.S. Patent No. 7269468 (hereinafter 468'). Although the conflicting claims are not identical, they are not patentably distinct from each other because as viewed from the mapping of each claim, the differences are descriptive matter. For example, see the claims and corresponding functions highlighted below that are the same.

Claim 1 of the present application:

A method for configuring **a state machine implemented in a function block associated with a process plant** via a computing device having a display device and an input device, wherein the state machine defines a plurality of states and wherein the state machine transitions between states based on state machine configuration data and one or more state machine inputs, wherein the state machine inputs are associated with operation of the process plant the method comprising:

- **Providing a graphical user interface displayed by the display device the graphical user interface including a plurality of graphical elements defining input/state pairs;**
- Receiving state transition data associated with one or more of the plurality of graphical elements via the input device, wherein for each of the one or more of the plurality of graphical elements for which state transition data is received, the state transition data identifies a next state to which the state machine transitions following conditions in the process plant corresponding to the input/state pairs defined by the graphical elements;
- **Storing the state transition data on a first computer readable medium associated with the function block.**

Claim 1 of the 468' application:

A method for configuring, via a computing device having a display device and an input device, a function block associated **with a process plant, the function block to implement a state machine**, the method comprising:

providing a first graphical user interface via the display device to configure values of at least some outputs of a plurality of outputs of the function block for each of at least some states of a plurality of states of the state machine, wherein the first graphical user interface includes a plurality of graphical elements, wherein at least some graphical elements of the plurality of the graphical elements are associated with respective pairings of ones of the at least some states with ones of the at least some outputs;

wherein the at least some outputs are to be used, at least in part, to effect one or more physical functions within the process plant; receiving output configuration data via the graphical user interface; and

Storing the output configuration data on a first computer readable medium associated with the function block.

Claim 34 of the present application:

34. (Currently Amended) A method of implementing a state machine in a **function block for use in controlling, or simulating control of, one or more field devices in a process plan**t, the method comprising:

providing a graphical user interface displayed by a, display device the graphical user interface including a p**lurality of graphical elements for configuring, state machine transitions between a plurality of state machine states, the graphical elements defining one or more state machine input/state pairs,** wherein one or more state machine inputs are indicative of one or more conditions within the process plant;

receiving state transition data identifying a state machine next state associated with at least one of the graphical elements via an interface input associated with the graphical user interface;

storing the state transition data on a first computer readable medium associated with the function block; receiving at least one state machine input; determining a state machine next state based, a least in part, on at least one of the at least one input, a current state, and the state transition data stored on the first computer readable medium; setting the current state of the state machine to the state machine next state; providing at least one function block output for use in controlling the one or more field devices to at least a second other function block, wherein the at least one function block output is based on the current state of the state machine.

Claim 35 of the 468' application:

A method of implementing a **function block for use in controlling one or more field devices in a process plant,** the method comprising: providing a graphical user interface via a display of a **computing device to configure values of at least some outputs of a plurality of outputs of the function block for each of at least some states of a plurality of states of a state machine to be implemented by the function block**; **wherein the at least some outputs are to be used, at least in part, to effect one**

or more physical functions within the process plant; receiving output configuration data via the graphical user interface; storing the output configuration data on a first computer readable medium associated with the function block; receiving at least one input associated with the process plant; changing a current state of the state machine, if necessary, based, at least in part, on the at least one input; retrieving, based on at least the current state, output configuration data associated with the current state from the first computer readable medium; and setting the at least some outputs based, at least in part, on the retrieved output configuration data.

Claim 58 of the present application:

A function block entity for use in a process plant having a processor adapted to control, or to simulate control of, one or more field devices, the function block entity comprising: a user modifiable state machine configuration database including state transition data indicative of how a state machine implemented by the function block is to transition among a plurality of states, wherein the state transition data comprises data for potential pairings of state machine one or more corresponding function block inputs, the state transition data indicative of a next state to which the state machine is to transition when the state machine is in a state corresponding to a particular one of tile pairings and when the input corresponding to the particular one of the pairings is a particular value; a first computer readable medium; first code stored on the first computer readable medium to receive the input inputs to the function block, wherein inputs
comprise data associated with the process plant; second code stored on the first computer readable medium to determine a next state of the state machine, wherein the determination is based on the at least one input, a current state of the state machine, and the state transition data, wherein the second code is fixed; **third code stored on the first computer readable medium to set the current state of the state machine to the next state, wherein the third code is fixed; and fourth code stored on the first computer readable medium to provide at least one function block output for use in controlling the one or more field devices.**

Claim 49 of the 468' application:

A function block entity for use in a process plant having a processor adapted to control one or more field devices, the function block entity comprising: a user modifiable state machine configuration database including output configuration data indicative of values of at least some outputs of a plurality of outputs of the function block for each of at least some states of a plurality of states of a state machine to be implemented by the function block; wherein the at least some outputs are to be used, at least in part, to effect one or more physical functions within the process plant; a first computer readable medium; first code stored on the first computer readable medium to receive at least one
input associated with the process plant; second code stored on the first computer readable medium to **change a current state of the state machine**, if necessary, based, at least in part, on the at least one input, wherein the second code is fixed; **third code stored on the first computer readable medium to retrieve, based on at least the current state, output configuration data associated with the current state from the configuration database, and fourth code stored on the first computer readable medium to set the at least some outputs based, at least in part, on the retrieved output configuration data.**

In claims 1, 34 and 58, the claims recited methods to present a graphical interface to a user where elements on the interface display the state transition of the state machine or the field devices. The function block entity in claim 58 contains a database to store the transitions. In the 468' application the structure is similar in that claims 1 and 35 also recite a graphical interface for displaying state transitions and claim 49 shows a database for storing the transition states. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention having the 468' application and Heimlich et al. 5903886 in front of them, to modify the present application to show the states on the interface to reflect the next state to transition to in the interface and the state of the field device and to store the transitions in a database because Heimlich teaches software design decisions for control an automation plant can be shown in a graphical interface (See column 3, lines 43-67).

Claim Rejections - 35 USC § 103

5. **The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:**

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 1-79 are rejected under 35 U.S.C. 102(e) as anticipated by Brandl et al (hereinafter Brandl) U.S. Patent No. 6834370 filed July 8, 1999 or, in the alternative, under 35 U.S.C. 103(a) as obvious over Brandl in view of Heimlich et al. (hereinafter Heimlich) U.S. Patent No. 5903886 field Apr. 29, 1997.**

In regard to **Independent claim 1,** Brandl teaches a method for configuring a state machine implemented in a function block associated with a process plant via a computing device having a display device and an input device, wherein the state machine defines a plurality of states and wherein the state machine transitions between states based on state machine configuration data and one or more state machine inputs, wherein the state machine inputs are associated with operation of the process plant (See column 1, lines 37-67) the method comprising:

- Providing a graphical user interface displayed by the display device the graphical user interface including a plurality of graphical elements defining input/state pairs (See Figure 35, 72, 74, 84-86 and (column 52, lines 23-35 and column 49, lines 19=25)
- Receiving state transition data associated with one or more of the plurality of graphical elements via the input device, wherein for each of the one or more of the plurality of graphical elements for which state transition data is received, the state transition data identifies a next state to which the state machine transitions following conditions in the process plant corresponding to the input/state pairs defined by the graphical elements (see Figure 84-86 and 35).
- Storing the state transition data on a first computer readable medium associated with the function block (See column 48, lines 1-25 and column 28, lines 1-10).

In the alternative, if the recipe inputs, which can be more then one or pair, are not considered state machine input pair and if the batch control process of processing recipes cannot be considered a state machine then in the alternative, Heimlich teaches a process that can be composed of a series of tasks (See column 3, lines 55-67) where the process flows specifically contain a input pair into a state machine (See Figure 9 and 10a-c and 11a-c, 12 and column 9, lines 1-67 and column 10, lines 1-40 and column 24, lines 1-67). Brandl teaches a process control mechanism for a process plant and Heimlich teaches a process input and control for an integrated circuit design plant.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention, having the teachings of Heimlich and Brandl in front of them, to modify the system of Brandl to specifically include the state machine of Heimlich for the purposes of showing an anticipated out from a particular set of recipes. The motivation to combine Heimlich with Brandl comes from the suggestion in Heimlich that the solution can be abstracted to any process composed of a series of tasks and specifically mentions machine automation as an area of implementation. Brandl is a specific example of machine automation and therefore presents the suggestion to combine (See column 3, lines 55-67 and column 26, lines 27-51).

With respect to **dependent claim 2,** Brandl teaches a method wherein the plurality of graphical elements comprises a first plurality of cells associated with the function block, wherein each cell of the first plurality of cells corresponds to an input/state pair; and (See Figure 35 and 74).
wherein receiving the state transition data comprises receiving data associated with one or more of the first plurality of cells via the input device, wherein the data is indicative of one or more next states to which the state machine is to transition when the state machine is in a state corresponding to one of the one or more of the first plurality of cells and when the input corresponding to the one of the one or more of the first plurality of cells is a particular value (See figure85-86).

With respect to **dependent claim 3,** Brandl teaches a method further comprising displaying the first plurality of cells on the display device and displaying indications of the state transition data in the one or more of the first plurality of cells for which state transition data have been received. (See figure 47, 85-86).

With respect to **dependent claim 4,** Brandl teaches a method wherein displaying the first plurality of cells on the display device comprises displaying a matrix comprising at least one row of cells and a plurality of columns of cells, wherein each row of cells is associated with a state machine input, and wherein each column of cells is associated with one of the plurality of states (See Figure 12-14 and 18 and column 33, lines 1-35)).

With respect to **dependent claim 5,** Brandl teaches a method wherein displaying the first plurality of cells on the display device comprises displaying a matrix comprising a plurality of rows of cells and at least one column of cells, wherein each row of cells is associated with one of the plurality of states, and wherein each column of cells is associated with a state machine input (See figure 12, 15-18 and 88).

With respect to **dependent claim 6,** Brandl teaches a method wherein the particular value of the input is one of a logical one, a logical zero, a logical TRUE or a logical FALSE value (See column 52, lines 24-37 and figure 84-85).

With respect to **dependent claim 7,** Brandl teaches a method further comprising: receiving data, via the input device, indicative of a number of the state machine inputs; and identifying cells in the first plurality of cells based on the number of state machine inputs (See column 48, lines 24-40).

With respect to **dependent claim 8,** Brandl teaches a method further comprising: receiving data, via the input device, indicative of a number of states in the plurality of states; wherein identifying the cells in the first plurality of cells comprises identifying cells based on the number of inputs and the number of states (See figure 35-36 and 72 and column 19, lines 20-45 and column 20, lines 37-65 and column 21, lines 30-55).

With respect to **dependent claim 9,** Brandl teaches a method further comprising: receiving data, via the input device, indicative of a number of states in the plurality of states; and
identifying a number of cells in the first plurality of cells based on the number of states (See column 22, lines 30-55 and column 21, lines 30-67 and column 28, lines 9-65).

With respect to **dependent claim 10,** Brandl teaches a method wherein the plurality of graphical elements further comprises a second plurality of cells associated with the function block, wherein each cell of the second plurality of cells corresponds to a respective one of a plurality of outputs of the function block and a respective one of the plurality of states of the state machine (See figure 74 and 85-86). receiving output configuration data associated with one or more cells of the second plurality of cells via the input device, wherein respective output configuration data associated with each of the one or more cells of the second plurality of cells includes data indicative of an output value of the output corresponding to the cell when the state machine is in the state corresponding to the cell (See figure 77and 82-83); and storing the output configuration data on a second computer readable medium associated with the function block (See column 28, lines 1-10).

With respect to **dependent claim 11,** Brandl teaches a method wherein the first computer readable medium comprises the second computer readable medium (See column 28, lines 1-10).

With respect to **dependent claim 12,** Brandl teaches a method further comprising: receiving data indicative of how to handle inputs that have a BAD status; and storing the data indicative of how to handle inputs that have the BAD status (See figure 50).

With respect to **dependent claim 13,** Brandl teaches a method wherein the one or more state machine inputs comprise a plurality of state machine inputs, the method further comprising:

Receiving data, via the graphical user interface, indicative of priorities associated with the plurality of state machine inputs; and storing the data indicative of how to handle inputs that have a BAD status (See column 28, lines 1-10 and figure 74 and figure 23).

With respect to **dependent claim 14,** Brandl teaches a method A method according to claim 1, further comprising receiving data indicative of whether one or more, if any, one or more state machine inputs should be ignored by the state machine; and storing the data indicative of whether one or more, if any, one or more state machine inputs should be ignored by the state machine (See column 28, lines 1-10 and column 22, lines 1-67).

With respect to **dependent claim 15,** Brandl teaches a method wherein the one or more state machine inputs is to be associated with at least one of a process control system, a simulation of a process control system, a safety system, and a simulation of a safety system (See column 18, lines 35-67).

With respect to **dependent claim 16,** Brandl teaches a method wherein the one or more state machine inputs is to be received from at least one other function block associated with the process plant (See column 18, lines 40-67).

With respect to **dependent claim 17,** Brandl teaches a method wherein the one or more state machine inputs are to be received from an operator interface (See figure 74 and column 48, lines 24-45).

With respect to **claims 18-33,** claims 18-33 reflect the computer readable medium comprising computer readable instructions for performing the method steps of claims 1-17, and thus are rejected along the same rationale.

With respect to **claims 34-57,** claims 34-57 represent substantially similar subject matter as claims 1-17, and in further view of the following are rejected along the same rationale. Brandl teaches a master recipe process that takes as inputs generic recipes to control a process plant and devices (See column 18, lines 37-67). Brandl teaches that a recipe provides the input in a sequence (See figure 14) and an interface that allows the user to interact, edit and change the sequence (See figure 74). Figure 14 clearly shows input pairs being input into a function block or cell and the information is stored on database (See column 28, lines 1-10). Brandl shows the function block with the state value as complete and shows that the process can indicate to the next cell the transition data. For example a valve will not turn on until the water has been heated to a specific temperature. The priorities are determined in the recipe sequence as shown in figure 11). Brandl teaches determining if a particular input is a value (See figure 10, as determination are made at each step). Brandl teaches storing the values for each state in the database so that the sequence of recipes can occur. Brandl teaches the unit procedures can be specific such as checking a formula, procedure, equipment requirements or a valve setting which can be a disabled state and can comprise a single input or force an input (See column 21, lines 1-67 and column 22, lines 1-67). Brandl specifically teaches a process control system (see column 18, lines 40-67) and teaches a process of controlling field devices. Brandl teaches the processes are related to cells and shown as a function block or recipe (See column 5, lines 20-67 and column 17, lines 10-45 and column 19, lines 20-35 and column 28, lines 1-67 and column 29, lines 15-67 and column 31, lines 10-27 and column 35, lines5-67 and column 47, lines 45-67 and column 48, lines 1-67 and column 50, lines 15-67 and column 51, lines 35-67 and column 52, lines 24-67 and column 53, lines 10-67).

With respect to **claims 58-79,** claims 58-79 reflect the apparatus containing a computer readable medium comprising computer readable instructions for performing the method steps of claims 34-57, and thus are rejected along the same rationale.

A reference to specific paragraphs, columns, pages, or figures in a cited prior art reference is not limited to preferred embodiments or any specific examples. It is well settled that a prior art reference, in its entirety, must be considered for all that it expressly teaches and fairly suggests to one having ordinary skill in the art. Stated differently, a prior art disclosure reading on a limitation of Applicant's claim cannot be ignored on the ground that other embodiments disclosed were instead cited. Therefore, the Examiner's citation to a specific portion of a single prior art reference is not intended to exclusively dictate, but rather, to demonstrate an exemplary disclosure commensurate with the specific limitations being addressed. In re *Heck*, 699 F.2d 1331, 1332-33,216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re *Lemelson*, 397 F.2d 1006,1009, 158 USPQ 275, 277 (CCPA 1968)). In re: *Upsher-Smith Labs. v. Pamlab, LLC,* 412 F.3d 1319, 1323, 75 USPQ2d 1213, 1215 (Fed. Cir. 2005); *In re Fritch,* 972 F.2d 1260, 1264, 23 USPQ2d 1780, 1782 (Fed. Cir. 1992); *Merck & Co. v. Biocraft Labs., Inc.,* 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989); *In re Fracalossi,* 681 F.2d 792,794 n.1,215 USPQ 569, 570 n.1 (CCPA 1982); *In re Lamberti,* 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976); *In re Bozek,* 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969).

Response to Arguments

Applicant's arguments with respect to claims 1-79 have been considered but are not persuasive.

Applicant's argument that Brandl does not teach configuring a state machine

Applicant argues that Brandl does not teach a method of configuring a state machine as defined in claim 1 because they argue that a state machine is not mentioned in Brandl (See argument page 4, remarks). The Examiner disagrees.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "configuration rules applied to the state machine to determine how and when to transition and the state machine defines 3 states) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In this case, nothing in the claims define expressly that a state machine has to have three states or that configuration rules are used. The examiner applied the rationale that a state machine models behavior or a process or procedure and the machine transitions between those states, and provides an output. In the common art, 'State" can refer to logical state, such and 1 and 0. Or, it can refer to "on" and "off" or state can reflect context; meaning operation or status. A button on an interface can be shown as pressed, which reflects state. A graphical element that displays the input of a temperature value along with a motor control value to operate a machine with direct output of the result to the graphical interface to show the temperature increasing and the valve opening is a state changing machine.

Brandl expressly shows inputs directed to a graphical element that will display a specific output with a given state transition applied to them. For example, (fig 85) Brandl expressly shows in step 64 two inputs or pairs where the charge 1 and charge b_1 are combined to form temp_ctrl 1: state. The status is reflected that the charges are complete that transition the data to complete to move to the next step in the recipe. Following the steps shown in figure 74, the user can see that the inputs to a given operation can have a single path or dual path, as shown in column 154. Dual paths require input pairs and direct transitions to the next state. In spite of applicants assertion that nothing is shown in the drawings that were cited in the rejection, the examiner contends the drawings expressly show a state machine that is configured by **user input** to function in a certain manner. The applicant argues that none of the drawings

show a next state to which the machine transitions. Figure 74, expressly shows the execution steps for the graphical elements in figure 72, where the charge operation ends and the system waits, and then adds ingredient A. Then the system waits for inputs. Then it adds in step 4. Each of these data inputs would identify the next state because, as figure 77 shows, each input is associated with data values that if the elements are not met then the display reflects a given output that drives the output for the graphical element.

Applicant's argument against the 103

Applicant argues that the 103 rejection supplied by the examiner is flawed for several reasons because they do not agree with the state machine interpretation of Brandl. As outlined above, the examiner broadly interprets a state machine to take an input and provide an output that models a behavior. Brandl teaches a graphical user interface that allows a user to configure a recipe that provides for the process functions of a processing plant. The recipe contains inputs to a process represented as a function block on the interface. Some of the inputs are input pairs. The interface represents the output to the user and a projected outcome of the state of the process. Therefore, in broad terms Brandl teaches a state machine. Each process step transitions from one state to the next as the processing is completed. If one step is not completed then the state changes to reflect that operation and the operations are stored. Heimlich expressly teaches a state machine. Figure 10c, expressly shows inputs into a state machine and Figure 11c shows a virtual tool that is an interface that allows the user to see outcomes from inputs into the machine as they affect the outputs. The examiner does not agree with applicants assessment of the prior art because at the very least the interface of Brandl teaches an interface that accepts inputs to transition the state of a process plant element and Heimlich teaches a state machine that accepts inputs for the purposes of modeling a manufacturing environment in an attempt to predict how latter steps will react with a given input and that the solution can be abstracted to apply to tasks being completed by an individual using a computer and machine automation. Brandl shows inputs to a process that are in pairs. Brandl shows how the inputs affect the outputs in the interface. Heimlich teaches and shows figure 9, step 1 machine feeds into step 2 and all of the processes are checked to see if the objective is complete. Figure 11a-11c show for a given input we get a given output. The set of inputs are emulated and via the user

interface in figure 12 the emulated outputs of the state machine are shown. The state machine predicts the output and is shown in figure 12. Therefore, the claims remain rejected over the office action mailed 9/03/2008.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN B. THERIAULT whose telephone number is (571)272-5867. The examiner can normally be reached on Mon.-Fri. 10 am - 7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on (571) 272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven B Theriault/
Primary Examiner
Art Unit 2179